



Complete Summary

GUIDELINE TITLE

Breast cancer.

BIBLIOGRAPHIC SOURCE(S)

Singapore Ministry of Health, National Committee on Cancer Care. Breast cancer.
Singapore: Singapore Ministry of Health; 2004 Mar. 72 p. [94 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
CONTRAINDICATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT
CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Breast cancer

- Ductal carcinoma in situ (DCIS)
- Invasive breast cancer

GUIDELINE CATEGORY

Evaluation
Management
Risk Assessment
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology
Oncology
Radiation Oncology
Radiology
Surgery

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Nurses
Patients
Physicians

GUIDELINE OBJECTIVE(S)

- To assist women and their doctors to make decisions on managing breast cancer
- To discuss the evidence for the many treatment options open to patients with breast cancer
- To provide information for pathologists and surgeons on the conventions in handling and reporting of pathological breast specimens

TARGET POPULATION

Women in Singapore of all ages with breast cancer

INTERVENTIONS AND PRACTICES CONSIDERED

Management of Ductal Carcinoma In Situ (DCIS)

1. Patient history, physical examination, and mammographic evaluation
2. Evaluation of contraindications to breast conservation surgery, including patient's reluctance to undergo radiotherapy
3. Mastectomy
4. Breast conservation surgery
5. Breast conservation and adjuvant radiotherapy
6. Re-excision of margins
7. Axillary dissection and sentinel node biopsy (not recommended for DCIS)
8. Tamoxifen (not recommended routinely in DCIS)
9. Use of tumor markers or other sophisticated means (e.g., imaging) to detect recurrence (not recommended)
10. Post-treatment monitoring, including mammography

Invasive Breast Cancer: Surgical Management

1. Patient history, physical examination, and mammographic evaluation
2. Evaluation of contraindications to breast conservation surgery, including patient's reluctance to undergo radiotherapy

3. Breast conservation surgery and adjuvant radiotherapy
4. Total mastectomy and axillary clearance
5. Use of tumor markers or other sophisticated means to detect recurrence (not recommended)
6. Post-treatment monitoring, including mammography

Invasive Breast Cancer: Adjuvant Cytotoxic and Hormonal Therapies

1. Risk stratification based on estrogen and/or progesterone receptor status, tumour size, and involvement of axillary lymph nodes
2. Tamoxifen therapy
3. Anthracycline (e.g., doxorubicin)-containing chemotherapy
4. Use of raloxifene (EVISTA) (not recommended in early breast cancer or as adjuvant treatment)
5. Ovarian ablation
6. Anastrozole therapy in postmenopausal women unable to tolerate tamoxifen

MAJOR OUTCOMES CONSIDERED

- Disease-free and overall survival
- Locoregional recurrence rates
- Risk of locoregional recurrence
- Quality of life

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level Ia: Evidence obtained from meta-analysis of randomised controlled trials

Level Ib: Evidence obtained from at least one randomised controlled trial

Level IIa: Evidence obtained from at least one well-designed controlled study without randomisation

Level IIb: Evidence obtained from at least one other type of well-designed quasi-experimental study

Level III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies, and case studies

Level IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

These guidelines were developed by a workgroup consisting of breast surgeons, a radiologist, medical and radiation oncologists, a pathologist, and a nurse with an interest in breast cancer. Sub-specialists drafted their respective contributions based on evidence available in the literature up to March 2003. The various sections were discussed by the workgroup as a whole and the consensus opinion of the members of the workgroup was accepted as recommendations for best clinical practice.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendations

Grade A (evidence levels Ia, Ib): Requires at least one randomised controlled trial as part of the body of literature of overall good quality and consistency addressing the specific recommendation.

Grade B (evidence levels IIa, IIb, III): Requires availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation.

Grade C (evidence level IV): Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates absence of directly applicable clinical studies of good quality.

GPP (good practice points): Recommended best practice based on the clinical experience of the guideline development group.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The recommendations that follow are those from the guideline's executive summary; detailed recommendations can be found in the original guideline document. Each recommendation is rated based on the level of the evidence and the grades of recommendation. Definitions of the grades of the recommendations (A, B, C, Good Practice Points [GPP]) and level of the evidence (Level I–Level IV) are presented at the end of the "Major Recommendations" field.

The original guideline document also contains a section on the pathology of breast cancer. This section provides useful information for pathologists and surgeons on the conventions in handling and reporting of pathological breast specimens.

Ductal Carcinoma in Situ (DCIS)

GPP - Mastectomy and breast conservation surgery and adjuvant radiotherapy are effective alternative treatments for ductal carcinoma in situ (DCIS), and the patient's preference should be considered in the choice of treatment. (GPP)

A - Nevertheless there are some cases in which breast conservation is contraindicated, which include:

- Presence of multicentric tumours involving more than one quadrant of the breast (McCormick et al., 1991).
- Diffuse malignant-looking microcalcifications throughout the breast (McCormick et al., 1991).
- Factors unrelated to DCIS but which may preclude the use of adjuvant radiotherapy may be considered relative contraindications to breast

- conservation. These include collagen vascular disease such as scleroderma and systemic lupus, pregnancy, and previous radiotherapy to the breast area (Mamounas et al., 1997; Julien et al., 2000; Bijker et al., 1998).
- Reluctance of the patient to undergo radiotherapy. As many patients may have inaccurate preconceptions of the side effects and toxicity of radiotherapy, a referral to a radiation oncologist is recommended before the decision is taken to not offer breast conservation for this reason alone (Mamounas et al., 1997; Julien et al., 2000; Bijker et al., 1998). (Grade A, Level I b)

A - Indications for breast conservation surgery and adjuvant radiotherapy include mammography-detected ductal carcinoma in situ, or palpable ductal carcinoma in situ with no suggestion of multicentricity or diffuse microcalcification on preoperative mammography (Mamounas et al., 1997; Fisher et al., 1999; Fisher et al., "Lumpectomy and radiation therapy," 1998; Julien et al., 2000; Bijker et al., 1998). (Grade A, Level I b)

A - No subgroup of ductal carcinoma in situ has been identified from randomised clinical trials that have not benefited from the addition of adjuvant radiotherapy. However, the addition of adjuvant radiotherapy to breast conservation surgery in small low grade ductal carcinoma in situ with clear margins of more than 1 cm adds minimal benefit in improving local control. For the group of patients where the benefit is small, the patient's attitude towards the risk and benefit of radiotherapy needs to be taken into consideration before radiotherapy is omitted (Mamounas et al., 1997; Fisher et al., 1999; Fisher et al., "Lumpectomy and radiation therapy," 1998; Julien et al., 2000; Bijker et al., 1998; Silverstein et al., 1996). (Grade A, Level I b)

A - Reexcision of margins should be undertaken when margin involvement is found on histological examination or if malignant-appearing microcalcification is seen in postoperative mammography (Mamounas et al., 1997). (Grade A, Level I b)

GPP - Orientation of the surfaces of the excision specimen at the time of initial surgery will allow the reexcision of that margin which is involved alone, and decrease cosmetic deformity. (GPP)

A - The likelihood of axillary involvement in DCIS is about 2 to 3%, and axillary dissection is therefore not recommended (Mamounas et al., 1997; Fisher et al., 1999; Fisher et al., "Lumpectomy and radiation therapy," 1998; Julien et al., 2000; Bijker et al., 1998). (Grade A, Level I b)

GPP - The role of sentinel node biopsy in DCIS is not resolved and is not recommended. (GPP)

A - Routine use of tamoxifen in DCIS is not indicated. (Grade A, Level I b)

C - The routine use of more sophisticated means to detect tumour recurrence in the absence of clinical signs and symptoms, such as tumour markers, imaging for metastasis, and liver function tests has not been shown to be useful or cost-effective and is discouraged (Morrow et al., "Standard for the management of ductal carcinoma in situ," 2002). (Grade C, Level IV)

C - Postoperatively, the clinical review of the patient is recommended at three- to six-monthly intervals for three years, six-monthly to 12-monthly for the second to fifth years, and annually thereafter (Morrow et al., "Standard for the management of ductal carcinoma in situ," 2002). (Grade C, Level IV)

A - Postoperative mammography is required to ensure removal of all malignant microcalcifications for screen-detected DCIS (Julien et al., 2000; Bijker et al., 1998). (Grade A, Level 1b)

GPP - Surgery and postoperative radiotherapy changes usually resolve six months to a year after treatment, and a repeat mammogram of the affected breast is recommended at the end of the first year (Morrow et al., "Standard for the management of ductal carcinoma in situ," 2002). (GPP)

C - Following the mammography of the affected breast at the end of the first year post-treatment, annual to two-yearly mammography of both breasts is recommended (Morrow et al., "Standard for the management of ductal carcinoma in situ," 2002). (Grade C Level IV)

Invasive Breast Cancer: Surgical Therapy

A - Breast conservation surgery and adjuvant radiotherapy and total mastectomy and axillary clearance are effective treatments for invasive breast cancer and the patient's preference should be considered in the choice of treatment (Veronesi et al., 1986; Veronesi et al., 1990; Arriagada et al., 1996; Fisher et al., 1995; Fisher et al., 1989; Jacobson et al., 1995; van Dongen et al., 2000; van Dongen et al., 1992; Blichert-Toft et al., 1992; "Favorable and unfavorable effects," 2000). (Grade A, Level Ia)

A - Nevertheless there are some cases in which breast conservation is contraindicated, which include ("Favorable and unfavorable effects," 2000):

- Presence of multicentric tumours involving more than one quadrant of the breast
- Diffuse malignant-appearing microcalcifications throughout the breast
- Persistent positive surgical margins following reasonable attempts for clear margins
- While there is no definite size that mandates mastectomy, a relative indication would be if surgical and radiological assessment suggests that adequate margins cannot be obtained with an acceptable cosmetic result. (see section on Neoadjuvant Chemotherapy).
- Factors unrelated to breast cancer but which may preclude the use of adjuvant radiotherapy may be considered relative contraindications to breast conservation. These include collagen vascular disease such as scleroderma and systemic lupus, pregnancy, and previous radiotherapy to the breast area.
- Reluctance of the patient to undergo radiotherapy. As many patients may have inaccurate preconceptions of the side effects and toxicity of radiotherapy, a referral to a radiation oncologist is recommended before the decision is taken to not offer breast conservation for this reason alone. (Grade A, Level Ia)

A - Patients with lobular cancer subtype can be offered breast conservation if there is a good chance that clear margins can be obtained and the presence of multi-centricity can be excluded ("Favorable and unfavorable effects," 2000). (Grade A, Level I a)

A - Enlarged axillary nodes, whether fixed or mobile, are not a contraindication to breast conservation surgery as no increase in local recurrence has been reported ("Favorable and unfavorable effects," 2000) (Grade A, Level I a)

A - Central location is not a contraindication to breast conservation surgery, as good control can be obtained with postoperative radiotherapy ("Favorable and unfavorable effects," 2000). (Grade A, Level I a)

A - A positive family history should not prevent a woman from considering breast conservation surgery and adjuvant radiotherapy, as previously reviewed studies have not shown an increase in local recurrence with this option ("Favorable and unfavorable effects," 2000). (Grade A, Level I a)

A - Reexcision of margins should be undertaken when margin involvement is found on histological examination or if malignant appearing microcalcification is seen in postoperative mammography (Veronesi et al., 1990; Veronesi et al., 1994). (Grade A, Level I b)

GPP - Orientation of the surfaces of the excision specimen at the time of initial surgery will allow the reexcision of that margin that is involved alone and decrease cosmetic deformity. (GPP)

B - Level II axillary dissection to include the clearance of nodes under the pectoralis minor will provide accurate staging information and maintain local control in the axilla. In cases where fixed axillary nodes are found in preoperative clinical examination, or the presence of gross extra-nodal spread at the time of axillary surgery, a level III clearance to include all nodes to the lateral border of the first rib may decrease the incidence of axillary recurrence (Veronesi et al., 1994). (Grade B, Level I I b)

C - The routine use of more sophisticated means to detect tumour recurrence, such as tumour markers, imaging for metastasis, and liver function tests, has not been shown to be useful or cost-effective and is discouraged (Morrow et al., "Standard for breast conservation therapy," 2002). (Grade C, Level IV)

C - Postoperatively, the clinical review of the patient is recommended at three- to six-monthly intervals for three years, six-monthly to twelve monthly for the second to fifth years, and annually thereafter (Morrow et al., "Standard for breast conservation therapy," 2002). (Grade C, Level IV)

C - Following the mammography of the affected breast at the end of the first year posttreatment, annual to two-yearly mammography of both breasts is recommended (Morrow et al., "Standard for breast conservation therapy," 2002). (Grade C, Level IV)

Invasive Breast Cancer: Adjuvant Cytotoxic and Hormonal Therapies

GPP - There are currently no data to support the use of raloxifene (EVISTA) as adjuvant hormonal therapy in early breast cancer, and use for adjuvant treatment in breast cancer is not recommended. (GPP)

A - Adjuvant treatments are recommended for the risk groups and patient groups as follows ("Tamoxifen for early breast cancer," 1998; "Polychemotherapy for early breast cancer," 1998):

Premenopausal*

ER or PR positive, Minimal/Low Risk: tamoxifen or no adjuvant therapy

ER or PR positive, Intermediate/High Risk: chemotherapy+tamoxifen or ovarian ablation+tamoxifen

ER and PR negative, Minimal/Low Risk: no adjuvant treatment

ER and PR negative, Intermediate/High Risk: chemotherapy

Postmenopausal

ER or PR positive, Minimal /Low Risk: tamoxifen or no adjuvant therapy

ER or PR positive, Intermediate/High Risk: chemotherapy+tamoxifen or tamoxifen

ER and PR negative, Minimal/Low Risk: no adjuvant treatment

ER and PR negative, Intermediate/High Risk: chemotherapy

(Grade A, Level 1b)

*ER = estrogen receptor; PR = progesterone receptor

Adjuvant Radiotherapy for Invasive and Noninvasive Breast Cancer

A - Postmastectomy radiotherapy should be offered to a patient with T3 or T4 primary tumours or with four or more lymph nodes involved (Overgaard et al., 1997; Overgaard et al., 1998; Voogd et al., 2001; Cuzick et al., 1994). (Grade A, Level Ia)

A - All patients undergoing breast conservation surgery for invasive and noninvasive breast cancer should be offered adjuvant radiotherapy (Goldhirsh et al., 2001; Fisher et al., "Tamoxifen," 2002; Fisher et al., "Twenty year follow up," 2002; Clark et al., 1996; Liljegren et al., 1999; Veronesi et al., 2001; Forrest et al., 1996). (Grade A, Level Ia)

GPP - All patients eligible for breast conservation should be referred for a radiation oncology consultation if the fear of breast conservation is radiation treatment. (GPP)

B - Radiation treatment should be given in the management of locally advanced tumours (Wilken et al., 1999; De Lena et al., 1981; Rubens et al., 1989). (Grade B, Level III)

Neoadjuvant Therapy for Operable and Inoperable Breast Cancer

A - In patients who desire breast conservation surgery, three to four cycles of anthracycline-based therapy after a biopsy of the tumour is recommended. Patients should be advised that a conversion to breast conservation may be possible in 20 to 30% of cases. If the tumour responds to chemotherapy,

lumpectomy and axillary lymph nodes dissection followed by radiotherapy may be considered if the patient meets the requirement for breast conserving therapy (Fisher et al., "Effect of preoperative chemotherapy," 1998; van der Hage et al., 2001). (Grade A, Level I b)

B - Breast conserving surgery may be followed by further individualized adjuvant chemotherapy such as additional anthracycline or taxane therapy (Ueno et al., 1997; Berg & Swain, 1994; Karlsson et al., 1998; Hortobagyi, 1994; Pierce et al., 1992). (Grade B, Level II a)

B - If after 3 to 4 cycles of preoperative chemotherapy the tumour fails to respond or the response is minimal or if there is progression at any point, a mastectomy plus axillary dissection should be performed. Adjuvant therapy for these patients should be individualised, followed by radiation therapy as required (Ueno et al., 1997; Berg & Swain, 1994; Karlsson et al., 1998; Hortobagyi, 1994; Pierce, et al., 1992). (Grade B, Level II a)

A - After completion of all surgery, chemotherapy, and radiation therapy, all patients with estrogen and/or progesterone receptor positive tumours should receive tamoxifen (Fisher et al., "Effect of preoperative chemotherapy," 1998; van der Hage et al., 2001). (Grade A, Level I b)

B - In patients with endocrine receptor positive tumours who are unfit or unwilling to receive chemotherapy, neoadjuvant endocrine therapy with third-generation aromatase inhibitors such as letrozole or anastrozole may be offered (Ueno et al., 1997; Berg & Swain, 1994; Karlsson et al., 1998; Hortobagyi, 1994; Pierce, et al., 1992). (Grade B, Level II a)

C - Initial treatment with anthracycline and/or taxane-based chemotherapy is recommended (Hortobagyi, 1994). (Grade C, Level IV)

B - For patients who respond to neoadjuvant chemotherapy, local therapy may consist of total mastectomy with axillary lymph node dissection or alternatively breast-conserving therapy can be considered in patients with a good partial or complete response to neoadjuvant chemotherapy (Fisher et al., "Effect of preoperative chemotherapy," 1998). (Grade B, Level II a)

C - Patients with an inoperable stage IIIA or stage IIIB tumour whose disease progresses during preoperative therapy should be considered for palliative breast irradiation in an attempt to enhance local control. Further systemic adjuvant chemotherapy following local therapy is felt to be standard (Hortobagyi, 1994). (Grade C, Level IV)

B - After surgery, adjuvant radiation therapy to the chest wall and regional lymphatics is recommended (Ueno et al., 1997; Berg & Swain, 1994; Karlsson et al., 1998). (Grade B, Level II a)

A - Hormone therapy should be administered to patients whose tumours are estrogen receptor- or progesterone receptor-positive or of unknown hormone receptor status (Willsher et al., 1997). (Grade A, Level I b)

A - Elderly and frail patients are exceptions to the intensive multimodal approach. In such a patient with a receptor positive tumour, tamoxifen alone (20 mg/day) may be used to reduce tumour size with few or no side effects (Willsher et al., 1997). (Grade A, Level Ib)

Grades of Recommendations

Grade A (evidence levels Ia, Ib): Requires at least one randomised controlled trial as part of the body of literature of overall good quality and consistency addressing the specific recommendation.

Grade B (evidence levels IIa, IIb, III): Requires availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation.

Grade C (evidence level IV): Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates absence of directly applicable clinical studies of good quality.

GPP (good practice points): Recommended best practice based on the clinical experience of the guideline development group.

Levels of Evidence

Level Ia: Evidence obtained from meta-analysis of randomised controlled trials

Level Ib: Evidence obtained from at least one randomised controlled trial

Level IIa: Evidence obtained from at least one well-designed controlled study without randomisation

Level IIb: Evidence obtained from at least one other type of well-designed quasi-experimental study

Level III: Evidence obtained from well-designed nonexperimental descriptive studies, such as comparative studies, correlation studies and case studies

Level IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations")

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate early management of breast cancer may help patients achieve the best outcomes in terms of prolonged survival, reduced morbidity, and better quality of life.

POTENTIAL HARMS

- There is limited data to define the optimal use of adjuvant chemotherapy for invasive breast cancer in women more than 70 years of age. Although the survival benefit is likely to be similar to younger women, there are legitimate concerns regarding the toxicity with chemotherapy in this patient population. The decision to treat these women with adjuvant chemotherapy will have to take these and other competing risks of mortality into consideration.
- Tamoxifen has been associated with a slight but definite increase in risk of endometrial cancer and venous thromboembolism. In the majority of women, the benefits of tamoxifen far outweigh its risks.

CONTRAINDICATIONS

CONTRAINDICATIONS

Absolute and relative contraindications to breast conservation surgery for both patients with ductal carcinoma in situ (DCIS) and patients with invasive breast cancer are listed in the "Major Recommendations" field.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines are not intended to serve as a standard of medical care. Standards of medical care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge advances and patterns of care evolve.
- The contents of this publication are guidelines to clinical practice, based on the best available evidence at the time of development. Adherence to these guidelines may not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care. Each physician is ultimately responsible for the management of his/her unique patient in the light of the clinical data presented by the patient and the diagnostic and treatment options available.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The following clinical audit parameters, based on the recommendations in these guidelines, are proposed:

- Percentage of women with breast cancer who were appropriately offered breast conservation surgery with adjuvant radiotherapy for management

Treatment options offered to breast cancer patients and the treatment selected should be documented. In cases where breast conservation surgery with adjuvant radiotherapy was not the treatment of choice, the reasons or contraindications should be documented.

- Percentage of women with breast cancer who are clinically reviewed at appropriate intervals postoperatively

Clinical reviews of the patient should be documented. As recommended in the guidelines, the clinical review of the patient is recommended at three to six-monthly intervals for three years, six-monthly to twelve-monthly for the second to fifth years, and annually thereafter.

- Percentage of women (with ductal carcinoma in situ [DCIS]/invasive breast cancer) who have used tumour markers, imaging for metastasis, and liver function tests to detect tumour recurrence
- Percentage of women with DCIS who had postoperative mammography (to ensure removal of all malignant microcalcifications)
- Percentage of women (with DCIS/invasive breast cancer) who had appropriate annual to two-yearly mammography of both breasts following the mammography of affected breast at the end of the first year posttreatment
- Percentage of women with estrogen receptor/progesterone receptor (ER/PR)-positive tumours given adjuvant hormonal therapy (i.e., tamoxifen)
- Percentage of women with T3, T4 primary tumours, or with 4 or more lymph nodes involved, being offered postmastectomy radiotherapy
- Percentage of women who had undergone breast conservation surgery being offered adjuvant radiotherapy

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Singapore Ministry of Health, National Committee on Cancer Care. Breast cancer. Singapore: Singapore Ministry of Health; 2004 Mar. 72 p. [94 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004 Mar

GUIDELINE DEVELOPER(S)

National Committee on Cancer Care (Singapore) - National Government Agency [Non-U.S.]
Singapore Ministry of Health - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

Singapore Ministry of Health (MOH)

GUIDELINE COMMITTEE

Workgroup on Breast Cancer

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Workgroup Members: Dr Phillip Iau, Consultant, Surgery Department, National University Hospital (Chairman); Dr Wee Siew Bock, Wee Breast & General Surgery, Mt Elizabeth Medical Centre (Co-Chairman); Dr Khoo Kei Siong, Head, Medical Oncology Department, National Cancer Centre; Dr Lim Siew Eng, Consultant, Department of Haemato-Oncology, National University Hospital; Dr Thomas Choudary Putti, Consultant, Department of Pathology, National University Hospital; Dr Karmen Wong Kit Yee, Karmen Wong Medical Oncology, Gleneagles Medical Centre; NO Saraswathy, Department of Nursing, Singapore General Hospital; A/Prof Wang Shih Chang, Chief, Department of Diagnostic Imaging, National University Hospital; Dr Back Michael Frederick, Consultant, Department of Radiation-Oncology, National University Hospital; Dr Chua Eu Tiong, Senior Consultant, Therapeutic Radiology Department, National Cancer Centre; Dr Tan Puay Hoon, Consultant Pathologist, Singapore General Hospital

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Singapore Ministry of Health Web site](#).

Print copies: Available from the Singapore Ministry of Health, College of Medicine Building, Mezzanine Floor 16 College Rd, Singapore 169854.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 28, 2004.

COPYRIGHT STATEMENT

This NGC summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions. Please contact the Ministry of Health, Singapore by e-mail at MOH_INFO@MOH.GOV.SG.

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect

those of NGC, AHRQ, or its contractor ECRI, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2006 National Guideline Clearinghouse

Date Modified: 9/25/2006

